

of No. 1. The others are well differentiated, yet closely related. No. 1 is the most abundant in numbers; the others are apparently rare.

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NOTES ON EASTERN AMERICAN ANCYLI. II.

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In preparing my former paper on this subject (NAUT., XVII, p. 13), I overlooked Hedley's note on *Ancylastrum* (Proc. Mal. Soc., I, p. 118) in which he calls attention to the fact that Bourguignat's type was *A. cumingianus* and not *A. fluviatilis*. The latter species being the type of the genus *Ancylus*, *Ancylastrum*, as used by Clessin and those who have followed him, was wholly unnecessary, being equivalent to *Ancylus s. s.* This rectification leaves the section represented by *A. fluviatilis* and characterized by its elevated, capuli-form shell, with the apex recurved and decidedly posterior, free, as it should be, to be known as *Ancylus s. s.*

The division of the Eastern American species into two sections distinguished by the character of the apex, was only a further step in the direction pointed out by Clessin in establishing his section *Haldemania* and, had his name been available, it would have been used for one of them. Independent of the apical characters, Clessin's group was a valid one, and he was entirely justified in separating it from the Eurasion sections represented respectively by *A. fluviatilis* and *lacustris*. And the fact that both of these species have the apex radiately striate, does not at all militate against the validity of Clessin's *Haldemania*, nor of the two sections that have been proposed to take its place. In order, however, that there may be no confusion hereafter on this point, the description of the section, which includes the Eastern American species with a striate apex, may be amended to read as follows:

Section *Ferrissia* Walker.

Shell conical, ovate, oval or oblong, usually elevated; apex acute or somewhat obtuse, placed only slightly behind the middle of the shell, and usually turned toward the right side, not recurved, radially striate.

Type: *A. rivularis* Say.

Most of the species belonging to this section are by preference in-

habitants of running water, and are usually found on stones, dead shells, etc., in rivers and streams. The smaller, stronger and more compact shell is no doubt the result of their environment. A few species, however, of which *A. parallelus* is the most notable example are to be found on plants or dead leaves in slow-flowing or stagnant water. The distribution of the species seems to be more general than that of the species of *Lævapex*.

I. *Ancylus rivularis* Say (1819). Pl. I, figs. 1-10 and 13-15.

This was the first species of American *Ancylus* to be described and the meagerness of the original description is probably to be attributed to this fact. But one dimension is given and nothing whatever is said in regard to the contour of the shell. It was not until *A. tardus* was differentiated in 1840, that any information was given on the latter subject and then only by inference. The consequent doubt as to what form was really intended to be covered by the description was recognized at an early date. The characteristic difference in the position of the apex and the shape of the shell was first pointed out by Adams (Thomp. Hist. of Vt., p. 164, 1842), and his remarks on the prevalent uncertainty in regard to Say's species are quoted with approval by Haldeman. It was not until the latter in his monograph supplied an accurate description and a good figure, that the species can really be said to have been established. I am inclined to agree with Haldeman rather than Tryon in considering Gould's *rivularis* (Invert. of Mass., p. 224), to be *parallelus* rather than Say's species.

Taking Haldeman's description as the typical expression of the species, *A. rivularis* is a well-marked form, which typically is easily differentiated from all other recognized species. It has a general distribution through the Northern States from New England to Nebraska and southerly to Virginia and through the Ohio and Mississippi Valleys southwest at least as far as New Mexico. I have not seen it, however, from any of the southern Atlantic or the Gulf States east of the Mississippi. It is subject to considerable variation, however, in size and contour, and it is not always easy to differentiate it from the western form of *A. tardus*. It is not likely to be mistaken for any of the other eastern American species, except perhaps *A. haldemani*, which differs in the particulars stated under that species.

(To be continued.)